What is claimed is:

1.   A wireless chat group system, comprising:

a controlling computer having a processor that executes computer instructions;

a wireless access point connected to the controlling computer;

5   two or more wireless communication devices each having a processor that executes computer instructions wherein the wireless communication devices communicate with the wireless access point and wherein a first wireless communication device further comprises computer instructions that request a chat session by communicating with the controlling computer through the wireless access point; and

10   wherein the controlling computer further comprises a chat group module having a chat group session manager and an address assignment module, the address assignment module further comprising computer instructions that assign a multicast internet protocol address to the chat session and the chat group session manager further comprising computer instructions that communicate a wake-up packet with the multicast internet protocol address to the wireless

15   communications devices associated with the chat session and computer instructions that start a timer when the first wireless communication device completes its transmission over the multicast internet protocol address wherein the multicast internet protocol address for the chat session remains assigned to the chat session as long as another transmission over the multicast internet protocol address occurs before the timer times out.

20   2.   The system of Claim 1, wherein the timer computer instructions further comprises computer instructions that disable the timer each time that a wireless communication device transmits over the multicast internet protocol address and computer instructions that restart the timer each time a transmission over the multicast internet protocol address is completed whereby the chat session remains active while at least one transmission occurs over the multicast internet

25   protocol address before the timer times out.

3.   The system of Claim 1, wherein the address assignment module further comprises computer instructions, when the timer times out, that revoke the multicast internet protocol address from the chat session to terminate the chat session and computer instructions that generate a unicast packet to each wireless communication device associated with the chat session

5   to terminate the chat session wherein each wireless communication device associated with the chat session further comprises computer instructions that, in response to the termination packet, transitions the wireless communication device from an active state to a standby state.

4.   The system of Claim 1, wherein each wireless communication device, associated with the chat session, further comprises a computer instruction, executed by a processor of the

10   wireless communication device, that transitions the wireless communication device from a standby state to an active state upon receipt of the wake-up packet from the controlling computer.

5.   The system of Claim 1, wherein the first wireless communication device further comprises a call button and wherein requesting the chat session is accomplished by depressing and holding the call button.

15   6.   The system of Claim 5, wherein the first wireless communication device further comprises computer instructions that generate a unicast packet to the controlling computer to request a chat session.

7.   The system of Claim 1, wherein the first wireless communication device further comprises computer instructions that release the multicast internet protocol address for the chat

20   session when the first wireless communication device has completed transmission and wherein the controlling computer further comprises computer instructions, in response to the release of the multicast internet protocol address by the wireless communication device, that cause an audible signal to be communicated to the wireless communication devices associated with the chat group indicating that the multicast internet protocol address is available for a transmission.

25   8.   The system of Claim 7, wherein the audible signal indicating the availability of the multicast internet protocol address is communicated to the first wireless communication

device via a plurality of unicast packets and the first wireless communication device further comprises computer instructions that communicate a plurality of multicast packets forwarding the audible signal to the other wireless communication devices that are part of the chat session.

9.   The system of Claim 8, wherein a second wireless communication device further comprises computer instructions that generates a unicast packet to the controlling computer to request control of the multicast internet protocol address after the first wireless communication device releases the multicast internet protocol address and wherein the controlling computer further comprises computer instructions that generate a chime to the second wireless communication device indicating that the second wireless communication device has control of the multicast internet protocol address and computer instructions that generate a warning tone to any other wireless communication devices that attempt to take control of the multicast internet protocol address, after the second wireless communication device has already been granted control of the multicast internet protocol address, indicating that control cannot be granted to the multicast internet protocol address.

10.   The system of Claim 7, wherein the first communication device further comprises a call button and wherein releasing the multicast internet protocol address is accomplished by releasing the call button.

11.   The system of Claim 10, wherein the first wireless communication device further comprises computer instructions that generate a unicast packet to the controlling computer to release the multicast internet protocol address.

12.   The system of Claim 1, wherein the timer further comprises twenty seconds.

13.   A wireless chat group system, comprising:

a controlling computer;

a wireless access point connected to the controlling computer;

two or more wireless communication devices wherein the wireless communication devices communicate with the wireless access point and wherein a first wireless communication device further comprises means for requesting a chat session by communicating with the controlling computer through the wireless access point; and

5 wherein the controlling computer further comprises a chat group module having a chat group session means and an address assignment means, the address assignment means further comprising means for assigning a multicast internet protocol address to the chat session and the chat group session means further comprising means for communicating a wake-up packet with the multicast internet protocol address to the wireless communications devices associated with 10 the chat session and means for starting a timer when the first wireless communication device completes its transmission over the multicast internet protocol address wherein the multicast internet protocol address for the chat session remains assigned to the chat session as long as another transmission over the multicast internet protocol address occurs before the timer times out.

15 14. The system of Claim 13, wherein the timer means further comprises means for disabling the timer each time that a wireless communication device transmits over the multicast internet protocol address and means for restarting the timer each time a transmission over the multicast internet protocol address is completed whereby the chat session remains active while at least one transmission occurs over the multicast internet protocol address before the timer times 20 out.

15. The system of Claim 13, wherein the address assignment means further comprises means, when the timer times out, for revoking the multicast internet protocol address from the chat session to terminate the chat session and means for generating a unicast packet to each wireless communication device associated with the chat session to terminate the chat session 25 wherein each wireless communication device associated with the chat session further comprises means for, in response to the termination packet, transitioning the wireless communication device from an active state to a standby state.

16.   The system of Claim 13, wherein each wireless communication device, associated with the chat session, further comprises means for transitioning the wireless communication device from a standby state to an active state upon receipt of the wake-up packet from the controlling computer.

5   17.   The system of Claim 13, wherein the first wireless communication device further comprises a call button and wherein requesting the chat session is accomplished by depressing and holding the call button.

18.   The system of Claim 17, wherein the first wireless communication device further comprises means for generating a unicast packet to the controlling computer to request a chat

10   session.

19.   The system of Claim 13, wherein the first wireless communication device further comprises means for releasing the multicast internet protocol address for the chat session when the first wireless communication device has completed transmitting and wherein the controlling computer further comprises means, in response to the release of the multicast internet protocol

15   address by the wireless communication device, for causing an audible signal to be communicated to the wireless communication devices associated with the chat group indicating that the multicast internet protocol address is available for a transmission.

20.   The system of Claim 19, wherein the audible signal indicating the availability of the multicast internet protocol address is communicated to the first wireless communication

20   device via a plurality of unicast packets and the first wireless communication device further comprises means for communicating a plurality of multicast packets forwarding the audible signal to the other wireless communication devices that are part of the chat session.

21.   The system of Claim 20, wherein a second wireless communication device further comprises means for generating a unicast packet to the controlling computer to request control of

25   the multicast internet protocol address after the first wireless communication device has released control and wherein the controlling computer further comprises means for generating a chime to

the second wireless communication device indicating that the second wireless communication device has control of the multicast internet protocol address and means for generating a warning tone to any other wireless communication devices that attempt to take control of the multicast internet protocol address, after the second wireless communication device has already been

5   granted control of the multicast internet protocol address, indicating that control cannot be granted to the multicast internet protocol address.

22.   The system of Claim 19, wherein the first communication device further comprises a call button and wherein releasing the multicast internet protocol address is accomplished by releasing the call button.

10   23.   The system of Claim 22, wherein the first wireless communication device further comprises means for generating a unicast packet to the controlling computer to release the multicast internet protocol address.

24.   The system of Claim 13, wherein the timer further comprises twenty seconds.

25.   A wireless chat session method implemented using a controlling computer, a

15   wireless access point connected to the controlling computer and two or more wireless communication devices wherein the wireless communication devices communicate with a wireless access point, the method comprising:

requesting a chat session by a first wireless communication device wirelessly connected to the controlling computer;

20   assigning, by the controlling computer, a multicast internet protocol address to the chat session;

communicating a wake-up packet with the multicast internet protocol address to the wireless communications devices associated with the chat session; and

starting a timer, in the controlling computer, when the first wireless communication

25   device completes its transmission over the multicast internet protocol address wherein the

multicast internet protocol address for the chat session remains assigned to the chat session as long as another transmission over the multicast internet protocol address occurs before the timer times out.

26.   The method of Claim 25 further comprising disabling the timer each time that a wireless communication device transmits over the multicast internet protocol address and restarting the timer each time a transmission over the multicast internet protocol address is completed whereby the chat session remains active while at least one transmission occurs over the multicast internet protocol address before the timer times out.

27.   The method of Claim 25, wherein the address assignment further comprises revoking, when the timer expires, the multicast internet protocol address from the chat session to terminate the chat session and generating a unicast packet to each wireless communication device associated with the chat session to terminate the chat session and transition the wireless communication device from an active state to a standby state in response to the termination unicast packet.

28.   The method of Claim 25 further comprising transitioning each wireless communication device associated with the chat session from a standby state to an active state upon receipt of the wake-up packet from the controlling computer.

29.   The method of Claim 25, wherein requesting the chat session further comprises depressing and holding a call button on a wireless communication device.

30.   The method of Claim 29, wherein requesting the chat session further comprises generating, at a wireless communication device, a unicast packet to the controlling computer to request a chat session.

31.   The method of Claim 25 further comprising releasing the multicast internet protocol address for the chat session when the first wireless communication device has completed transmitting and communicating, in response to the release of the multicast internet protocol address by the wireless communication device, an audible signal to the wireless

communication devices associated with the chat group indicating that the multicast internet protocol address is available for a transmission.

32. The method of Claim 31, wherein the audible signal indicating the availability of the multicast internet protocol address is communicated to the first wireless communication
5   device via a plurality of unicast packets and further comprising communicating, via the first wireless communication device, a plurality of multicast packets forwarding the audible signal to the other wireless communication devices that are part of the chat session.

33. The method of Claim 32 further comprising generating, by a second wireless communication device, a unicast packet to the controlling computer to request control of the
10   multicast internet protocol address after the first wireless communication device releases control, generating, at the controlling computer, a chime to the second wireless communication device indicating that the second wireless communication device has control of the multicast internet protocol address and generating, at the controlling computer, a warning tone to any other wireless communication devices that attempt to take control of the multicast internet protocol address,
15   after the second wireless communication device has already been granted control of the multicast internet protocol address, indicating that control cannot be granted to the multicast internet protocol address.

34. The method of Claim 31, wherein releasing the multicast internet protocol address further comprises releasing a call button of the wireless communication device.

20   35. The method of Claim 34, wherein releasing the multicast internet protocol address further comprises generating a unicast packet to the controlling computer to release the multicast internet protocol address.

36. The method of Claim 25, wherein the timer further comprises twenty seconds.

37. A wireless chat group system, comprising:

25   a controlling computer having a processor that executes computer instructions;

a wireless access point connected to the controlling computer;

two or more wireless communication devices each having a processor that executes computer instructions wherein the wireless communication devices communicate with the wireless access point and wherein a first wireless communication device further comprises

5   computer instructions to request a chat session by generating a unicast packet that is communicated to the controlling computer through the wireless access point; and

wherein the controlling computer further comprises a chat group module having a chat group session manager and an address assignment module, the address assignment module further comprising computer instructions that assign a multicast internet protocol address to the

10   chat session and the chat group session manager further comprising computer instructions that generate a wake-up unicast packet to each wireless communications devices associated with the chat session that communicates the multicast internet protocol address wherein the chat session occurs via multicast packets sent from the first wireless communication device to the other wireless communication devices associated with the chat session.

15   38.   The system of Claim 37, wherein each wireless communication device, associated with the chat session, further comprises a computer instruction, executed by a processor of the wireless communication device, that transitions the wireless communication device from a standby state to an active state upon receipt of the wake-up packet from the controlling computer.

39.   The system of Claim 37, wherein the first wireless communication device further

20   comprises a call button and wherein generating the unicast packet to request the chat session is accomplished by depressing and holding the call button.

40.   The system of Claim 37, wherein the first wireless communication device further comprises computer instructions that release the multicast internet protocol address for the chat session when the first wireless communication device has completed transmitting and wherein

25   the controlling computer further comprises computer instructions, in response to the release of the multicast internet protocol address by the wireless communication device, that cause an

audible signal to be communicated to the wireless communication devices associated with the chat group indicating that the multicast internet protocol address is available for a transmission.

41.   The system of Claim 40, wherein the audible signal indicating the availability of the multicast internet protocol address is communicated to the first wireless communication

5   device via a plurality of unicast packets and the first wireless communication device further comprises computer instructions that communicate a plurality of multicast packets forwarding the audible signal to the other wireless communication devices that are part of the chat session.

42.   The system of Claim 41, wherein a second wireless communication device further comprises computer instructions that generates a unicast packet to the controlling computer to

10   request control of the multicast internet protocol address after the first wireless communication device releases control and wherein the controlling computer further comprises computer instructions that generate a chime to the second wireless communication device indicating that the second wireless communication device has control of the multicast internet protocol address and computer instructions that generate a warning tone to any other wireless communication

15   devices that attempt to take control of the multicast internet protocol address, after the second wireless communication device has already been granted control of the multicast internet protocol address, indicating that control cannot be granted to the multicast internet protocol address.

43.   The system of Claim 40, wherein the first communication device further

20   comprises a call button and wherein releasing the multicast internet protocol address is accomplished by releasing the call button.

44.   A wireless chat group system, comprising:

a controlling computer;

a wireless access point connected to the controlling computer;

two or more wireless communication devices wherein the wireless communication devices communicate with the wireless access point and wherein a first wireless communication device further comprising means for generating a unicast packet to request a chat session that is communicated to the controlling computer through the wireless access point; and

5   ·wherein the controlling computer further comprises a chat group module having a chat group session means and an address assignment means, the address assignment means further comprising means for assigning a multicast internet protocol address to the chat session and the chat group session means further comprising means for generating a wake-up unicast packet to each wireless communications devices associated with the chat session that communicates the multicast internet protocol address wherein the chat session occurs via multicast packets sent from the first wireless communication device to the other wireless communication devices associated with the chat session.

45.   The system of Claim 44, wherein each wireless communication device, associated with the chat session, further comprises means for transitioning the wireless communication device from a standby state to an active state upon receipt of the wake-up packet from the controlling computer.

46.   The system of Claim 44, wherein the first wireless communication device further comprises a call button and wherein generating the unicast packet to request the chat session is accomplished by depressing and holding the call button.

20   47.   The system of Claim 44, wherein the first wireless communication device further comprises means for releasing the multicast internet protocol address for the chat session when the first wireless communication device has completed transmitting and wherein the controlling computer further comprises means, in response to the release of the multicast internet protocol address by the wireless communication device, for causing an audible signal to be communicated to the wireless communication devices associated with the chat group indicating that the multicast internet protocol address is available for a transmission.

48. The system of Claim 47, wherein the audible signal indicating the availability of the multicast internet protocol address is communicated to the first wireless communication device via a plurality of unicast packets and the first wireless communication device further comprises means for communicating a plurality of multicast packets forwarding the audible

5   signal to the other wireless communication devices that are part of the chat session.

49. The system of Claim 48, wherein a second wireless communication device further comprises means for generating a unicast packet to the controlling computer to request control of the multicast internet protocol address after the first wireless communication device releases control and wherein the controlling computer further comprises means for generating a chime to

10   the second wireless communication device indicating that the second wireless communication device has control of the multicast internet protocol address and means for generating a warning tone to any other wireless communication devices that attempt to take control of the multicast internet protocol address, after the second wireless communication device has already been granted control of the multicast internet protocol address, indicating that control cannot be

15   granted to the multicast internet protocol address.

50. The system of Claim 47, wherein the first communication device further comprises a call button and wherein releasing the multicast internet protocol address is accomplished by releasing the call button.

51. A wireless chat session method implemented using a controlling computer, a

20   wireless access point connected to the controlling computer and two or more wireless communication devices wherein the wireless communication devices communicate with the wireless access point, the method comprising:

    generating a unicast packet requesting a chat session by a first wireless communication device that is wirelessly communicated to the controlling computer;

25   assigning, by the controlling computer, a multicast internet protocol address to the chat session; and

communicating, using a wake-up unicast packet to each wireless communication device associated with the chat session, the multicast internet protocol address for the chat session to each wireless communications devices associated with the chat session wherein the chat session occurs via multicast packets sent from the first wireless communication device to the other

5   wireless communication devices associated with the chat session.

52.   The method of Claim 51 further comprising each wireless communications device associated with the chat session, transitioning each wireless communication device associated with the chat session from a standby state to an active state upon receipt of the wake-up packet from the controlling computer.

10   53.   The method of Claim 51, wherein generating the unicast packet to request the chat session further comprises depressing and holding a call button on the first wireless communication device to generate the unicast packet.

54.   The method of Claim 51 further comprising generating a unicast packet at the first wireless communication device to release the multicast internet protocol address for the chat

15   session when the first wireless communication device has completed transmitting and communicating, in response to the release of the multicast internet protocol address by the wireless communication device, an audible signal to the wireless communication devices associated with the chat group indicating that the multicast internet protocol address is available for a transmission.

20   55.   The method of Claim 54, wherein generating the audible signal indicating the availability of the multicast internet protocol address is communicated to the first wireless communication device via a plurality of unicast packets and further comprising communicating, using the first wireless communication device, a plurality of multicast packets forwarding the audible signal to the other wireless communication devices that are part of the chat session.

25   56.   The method of Claim 55 further comprising generating, by a second wireless communication device, a unicast packet to the controlling computer to request control of the

multicast internet protocol address after the first wireless communication device releases control, generating, at the controlling computer, a chime to the second wireless communication device indicating that the second wireless communication device has control of the multicast internet protocol address and generating, at the controlling computer, a warning tone to any other wireless

5   communication devices that attempt to take control of the multicast internet protocol address, after the second wireless communication device has already been granted control of the multicast internet protocol address, indicating that control cannot be granted to the multicast internet protocol address.

57.   The method of Claim 54, wherein releasing the multicast internet protocol address

10   further comprises releasing a call button on the first wireless communication device in order to release the multicast internet protocol address.

58.   A wireless communication device that operates with a wireless chat group system having a controlling computer, a wireless access point connected to the controlling computer and two or more wireless communication devices wherein the wireless communication devices

15   communicate with the wireless access point, the wireless communication device comprising:

a processor that executes a plurality of computer instructions, the computer instructions comprising computer instructions that generate a unicast packet communicated to a computer to request a chat session, computer instructions that receive a wake-up unicast packet from the computer containing the multicast internet protocol address assigned to the chat session in

20   response to the request of the chat session, and computer instructions that communicate with other wireless communication devices in the chat session using multicast packets.

59.   The device of Claim 58, wherein each wireless communication device, associated with the chat session, further comprises a computer instruction, executed by a processor of the wireless communication device, that transitions the wireless communication device from a

25   standby state to an active state upon receipt of the wake-up packet from the controlling computer.

60.   The device of Claim 58 further comprising a call button and wherein generating the unicast packet to request the chat session is accomplished by depressing and holding the call button.

61.   The device of Claim 58 further comprises instructions that generate a unicast packet to release the multicast internet protocol address for the chat session when the first communication device has completed transmitting and computer instructions that forward an audible signal from the controlling computer to the wireless communication devices associated with the chat session indicating that the multicast internet protocol address is available for a transmission.

62.   The device of Claim 61 further comprising a call button and wherein the call button is released in order to release the multicast internet protocol address.

63.   A method for a chat group session over a wireless communication system having a controlling computer, a wireless access point connected to the controlling computer and two or more wireless communication devices wherein the wireless communication devices communicate with the wireless access point, the method comprising:

requesting a chat session using a unicast packet between a requesting wireless communication device and the controlling computer;

transmitting, to each wireless communication device associated with the chat group, a unicast wake-up packet with an assigned multicast internet protocol address;

implementing the chat session between the wireless communication devices using multicast packets over the assigned multicast internet protocol address; and

releasing the chat session by a particular wireless communication device associated with the chat session using a unicast packet to the controlling computer.

64.   The method of Claim 63 further comprising terminating the chat session wherein the controlling computer generates a unicast packet to each wireless communication device

associated with the chat group indicating the termination of the chat session and wherein each wireless communication device associated with the chat session transitions from an active state to a standby state in response to the termination packet from the controlling computer.